

FILE

EXECUTIVE SUMMARY

WESTERN INTERNATIONAL CORPORATION

Silver Maple Mine
ACT/043/003005
Summit County, Utah

GENERAL:

Western International Corporation, hereinafter "the applicant" filed a Notice of Intention to Commence Mining Operations on April 15, 1980 with the Division of Oil, Gas and Mining hereinafter "the Division". Mr. Gene William Gray has filed legal claims known as Maple No. 1 and Maple No.2. Mr. Gray and Mr. Dennis K. Engle formed a Utah Corporation, Western International Corporation, to develop these claims. The name of the mining operation proposed to mine these claims is the Silver Maple Mine. The operation will consist of reprocessing old mine tailings for recovery of gold and silver. The tailings are adjacent to a mine known as the Silver King Extension.

LOCATION:

The Maple No. 1 and Maple No. 2 claims encompass approximately 36.6 acres. The claims are located in parts of the SW 1/4 and SE 1/4 of Section 3 and parts of the NW 1/4 and NE 1/4 of Section 10, All in Township 2 South, Range 4 East, SLBM, Summit County, Utah. The proposed Silver Maple Mine will lie 1.5 miles southwest of the Keetley Junction adjacent to Utah State Highway 248 (alternate U.S. 40). The proposed access road to the mine is approximately 2,000 feet northeast of the Park City Limits. (See attached map-Exhibit 1)

SOILS AND GEOLOGY:

The mine site consist of mine tailings that were deposited along Silver Creek. The tailings were deposited on Quaternary Alluvium. The northern slope of the drainage is underlain by the Triassic Woodside Shale, dark and purplish-red shale, siltstone, and very fine grained sandstone. The southern slope of the drainage is underlain by rocks of the Permian Park City Formation, pale and gray-weathering cherty and fossiliferous limestone and pale-orange and tan sandstone.

Western International Corporation presented a soils report prepared by the Utah State University extension service. The report shows the soils in the leases as mine tailings. The soil texture is reported as sandy loam and loam. The pH of the soils range from 6.9 to 7.2. The tailings are estimated to be from nine to twenty-five feet through the proposed area of mining. The natural soils are buried, but silts have been deposited in and adjacent to the ponds and stream. The Bureau of Land Management investigation reports that the dumped tailings remain as mounds on the landscape and a lack of vegetation illustrates the infertility of the tailings.

HYDROLOGY:

The Bureau of Land Management reports as follows:

"Silver Creek flows through the site west to east. The stream is turbid at all times due to the deepcut, raw banks upstream from the mining site. Water temperature measurements taken over a four-hour period on April 29,

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1981 showed considerable temperature fluctuation between stream reaches. Discharge, as measured on that same date, was 0.9 cfs. Flood hazard is low. The flood plain is roughly defined by the railroad tracks on the south and the road bank on the north. Silver Creek drops about 40 feet in the 3,000 foot distance across the two mining claims. Five major beaver ponds and several minor ones are located on the stream within the proposed mining site. The stream channel is poorly defined, as outflow from the ponds has shifted to and fro creating numerous small channels in the easily erodable tailings. A canal carrying about 2 cfs of water extends along the north edge of the site. The canal water originates from nearby springs and is of good quality."

The applicant intends to divert Silver Creek to the north, parallel to the highway, so that mining can be accomplished. Two ponds will be constructed in the dry channel. The applicants ponds will be cut into the tailings and diked at the downstream end. The pond will be 100 feet by 10 feet by 10 feet deep. The ponds are to serve as the water supply for the concentrators. The pond downstream will be constructed but left dry for storm runoff. The ponds will be filled if needed by a water right from Mr. Stanley Pace.

The mining operation by diverting the stream will destroy the existing stream channel and beaver ponds. The Bureau of Land Management states in a Draft Environmental Assessment that:

"The area would be uninhabitable to beaver, muskrat, ducks, fish, frogs, and other aquatic wildlife. Willows, grasses, and other vegetation closely associated with surface water would be eliminated." "A new stream bed about 3,600 feet long would be developed by the proponent. The stream will carry a shortterm small increase of suspended solids until it becomes stabilized. Leaching of dissolved minerals and transport of mineral particulate may increase over that same period. Very minor reduction of water quality would occur downstream and only for a short period of time. Once stabilized, and with BLM stipulated stream designs in place, the newly located stream would be improved fish habitat. Elimination of the ponds and associated backwaters would remove habitat for mosquito breeding and larvae rearing. This would reduce mosquito numbers in and around Park City."

The applicant has made application to the State Engineer to alter the natural stream. The State Engineer cannot find a water right application for the mining and reprocessing. The concentrators use 200 gallons per minute of water and the applicant will have to secure a water supply prior to mining.

There will be no discharge from the concentrators in that the water supply will be drawn off Silver Creek into ponds with no return to the stream permitted. The water will be drawn to the concentrators via rubber hose and returned to the ponds via ditches with wooden liners.

ECOLOGY:

Vegetation would be disturbed in the area of mining lying between the Silver Creek Diversion and the railroad right-of-way the applicant expects to disturb 12.26 acres during the first three years of operation. The Bureau of Land Management reports that a moderately dense stand of willows, plus cat tails, riparian grass, sedges, rushes, sagebrush, and the clusters totaling eight mature quaken aspen would be removed. The applicant has agreed to provide the Division the surrounding vegetative cover levels using professionally accepted inventory methods to determine a basis for revegetation.

All wildlife on the disturbed area would be destroyed or displaced. Upon reconstruction of the stream channel the small riparian animals such as muskrat and frogs would return. The new stream channel could improve stream habitat over a distance of approximately 2,000 feet. The habitat for Beaver may be permanently lost. Mr. George Wilson of the Division of Wildlife Resources made an inspection on May 6, 1981 and confirmed to the Bureau of Land Management that the site to be mined contained no significant fish or wildlife values that cannot be mitigated by measures required by the Bureau of Land Management.

MINING AND RECLAMATION PLAN:

During Operations:

The applicant will construct a diversion of Silver Creek large enough to handle a 24-hour, 50-year storm and a 50-year high snow pack the diversion will not encroach on surface lands of either Park City Corporation to the west or Wortley Property to the east unless documentation of surface owners consent is provided to the Division and approved.

The applicant will construct the access road from State Route 248 in accordance with the Utah State Department of Transportation approval of April 17, 1981. The irrigation ditch and proposed Silver Creek Diversion will be crossed using culverts and in no case will either the Diversion or culverts be installed without documentation supplied to the Division demonstrating the Utah State Engineers approval and the U.S. Army Corps of Engineers.

Two settling ponds will be constructed and designed to contain the 50-year, 24-hour precipitation event, thereby preventing any entrance of runoff from the disturbed area entering Silver Creek.

The applicant will fence the site to prevent access of children and to protect public safety.

No explosives shall be used during the mining operations.

No chemicals of any kind will be used on site, and no water will be allowed to discharge from the concentrator, return ditch, or ponds to Silver Creek. Other than a culvert for the access road, the irrigation canal will not be affected in any way.

Upon submission of evidence demonstrating the applicant has secured a legal water right and the water and proposed diversion point has been approved by the State Division of Water Rights the applicant will be allowed to divert water into his ponds for mining use from Silver Creek.

The applicant intends to mine and process approximately 178,000 cubic yards of tailings. Mining will progress by removing strips of tailing in 200 foot widths to a depth of between 9 to 25 feet in depth but in no case deeper than the tailings. The tailings will be dozed into a pile, loaded into a hopper, conveyed by a belt into a small roll crusher and conveyed into two consecutive spiral concentrators where the concentrates will be separated. The mineral concentrates will be hauled to Salt Lake City for refining. The reject will be hauled back to the mining area and deposited. The applicant will be required to spread and compact the rejected materials to 90% in lifts no greater than two feet.

The applicant expects to process 3,300 cubic yards of tailings per week. The production is projected as follows:

<u>Year</u>	<u>Weeks of Operation</u>	<u>cu/yds</u>	<u>Disturbed Acreage</u>
1981	10	33,000	2.27
1982	25	82,500	5.68
1983	<u>19</u>	<u>62,700</u>	<u>4.31</u>
TOTAL	54	178,200	12.26

*Assumes tailings average 9 feet in depth.

The concentrates are expected to not amount to more than 10%. Therefore the final contour should not drop in elevation more than 1 foot.

A chemical type toilet will be placed on the site and the sewage will be disposed of according to the Utah Division of Health requirements.

The applicant will sprinkle the area of operations with water during mining to allay dust effluents.

After Operations:

Total disturbance for mining as above including the two privately owned surface areas should not exceed 13 acres. If the applicant expects to mine on the southern side of the tracks an additional 7 acres could be mined, however, the applicant will modify the permit if mining is to continue beyond 1983.

The applicant will mine in an eastern direction starting at the line of Park City Corporation surface property. The reject materials will be deposited, compacted and graded each year. The applicant will revegetate disturbed and recontoured areas at the conclusion of each mining season (October). The applicant will import and distribute topsoil to depths necessary to insure revegetation. Nutrients will be added to the topsoil as required from soil tests, and planted with seed and planting stock as required. The applicant agrees to plant with amounts and species as specified by the Bureau of Land Management and Division.

A new stream channel will be constructed by the applicant at the conclusion of each mining season (October). The new stream channel will be constructed pursuant to Bureau of Land Management and the Division stipulations for length, gradient, meander, banks, riprapping, etc.

The applicant has agreed to enhance the operation by establishing a buffer comprised of a row of Russian olive, Lombardi poplar, or other rapid growing trees, using ballrooted young adult plants (3-5 years old). The buffer is to be placed along the west boundary of the mine site for protection of the residents a short distance west of the site.

IMPACTS:

This operation can be viewed as a reclamation effort in part. The reclamation planned should over the long term, enhance the ecology of the area, through diligent efforts of the applicant.

The major impacts would be the destruction of the natural reclamation of the tailings that has occurred during the last 30 years. During operations noise and dust may annoy the Park City residents to the west of the operation during daylight hours of the summer mining season.

SURETY:

The Division has provided the tentative bond amount for this operation and recommends that either a bond be posted or monies be placed in trust with a bank for reclamation surety. The bonding schedule is attached as Exhibit 2 and is based on the maximum amount of reclamation that would be required to reclaim the mining site.

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RECOMMENDATION:

The Division recommends that tentative approval be given to Western International Corporation for the Silver Maple Mine with the condition that the applicant obtain approval of the Bureau of Land Management, and all other State and Federal and local agencies with jurisdiction over these operations. The applicant must post a surety in a form and amount acceptable to the Division prior to final approval.



DIVISION OF OIL, GAS AND MINING

BOND ESTIMATE

OPERATOR: Western International Corporation
MINE NAME: Silver Maple Mine
LOCATION: SW 1/4, SE 1/4, Sec. 3, NW 1/4 NE 1/4, Sec. 10, T. 2S., R. 4E.
COUNTY: Summit County, Utah
DATE: May 28, 1981

BASE DATA

- A. Maximum Area Disturbed
1. 1982 - 5.68 acres
- B. Maximum Cubic Yards to be Regraded
1. Assume 20% (82.700) = 16,500 yd³
2. Topsoil - 5.68 acres @ 1/2 ft. = 4,600 yd³
- C. Other Reclamation
1. Road - approximately 500 ft.
2. Fence - approximately 1,200 ft. (1982)
3. New Channel - approximately 2,000 ft
- D. Base Costs
- | | |
|-------------------------|----------------|
| 1. Ditch Excavation | \$.60/1ft |
| 2. Remove Fence | \$1.50/1ft |
| 3. Rough Grading | \$1.48/cu. yd. |
| 4. Topsoil Distribution | \$1.50/cu. yd. |
| 5. Topsoil Cost | \$1.42/cu. yd. |
| 6. Seeding | \$157.00/acre |
| 7. Mulching | \$219.00/acre |
| 8. Obliterate Road | \$.16/ft. |

BOND CALCULATION

A. Cleanup

1. Remove Fence	2,000 ft. x \$1.50/ft.	\$3,000.00
2. Obliterate Road	500 ft. x \$0.16/ft.	\$ 80.00
3. Remove Equipment and Trash	24 hrs x \$11.00/hr	<u>\$ 264.00</u>
	Subtotal Cleanup	<u>\$3,344.00</u>

B. Regrading and Recontouring

1. Regrading (1983)	16,500 cu.yd. x \$1.48/cu.yd	\$24,420.00
2. Excv. Stream (1982)	1,200 ft. x \$0.60/ft.	<u>\$ 720.00</u>
	Subtotal Regrad	<u>\$25,140.00</u>

C. Stabilization

1. Purchase Topsoil	4,600 x \$1.42/yd.	\$ 6,532.00
2. Distribute Topsoil	4,600 x \$1.50/yd.	\$ 6,900.00
3. Revegetation-5.7ac.		
Soil Testing	5.7 ac. x \$70.00/acre	\$ 399.00
Seeding	5.7 ac. x \$157.00/acre	\$ 895.00
Fertilizer	5.7 ac. x \$70.00/acre	\$ 399.00
Mulching	5.7 ac. x \$219.00/acre	\$ 1,248.00
Irrigation		
	Subtotal Stabilization	<u>\$16,373.00</u>

D. Monitoring

1. Vegetation	5yrs. x 16hrs./yr. = \$11./hr.	\$ 880.00
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TOTAL RECLAMATION COST:

\$45,737.00

ESCALATION 1.22 @ 3 YRS. 1.82 (FACTOR)

TOTAL BOND \$83,241.00

1. DOT estimate last year